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LEARNING. CREATIVELY. TOGETHER.

EDUCATIONAL CHANGE REPORT 2016



UNIVERSITY OF HELSINKI
FACULTY OF BEHAVIOURAL SCIENCES

Learning. Creatively. Together.
Educational Change Report 2016

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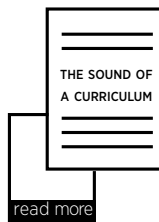
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FOREWORD

Learning happens everywhere, intentionally and unintentionally, in physical environments and digital worlds. Today learning is strongly seen as ubiquitous and school represents only one of the sources of information; knowledge is democratized and increasingly built non-linearly. This development is provoking a wide educational change. In terms of education and schooling, all this implies the need to update our perceptions and understanding concerning learning environments and pedagogy.



The preliminary focus in the educational change is to help children to learn to live in a rapidly changing and increasingly digital world. Thus, the salient question is how to promote educational change and inspire teachers to develop their pedagogical practices, school culture and curriculum. Children need to be confident to face the “unscripted world” like professor emeritus Lee Shulman puts it.

The school must not only guarantee achievements in a variety of subjects, but also foster children’s proficiency as future citizens. This can be reached by renewing curriculum, pedagogical collaboration and pedagogical practices. Claxton (2002, 23) describes the nature of education in the future.

If the main thing we know about the future is that we do not know much about it, then the key responsibility of the educator is not to give young people tools that may be out of date before they have even been fully mastered, but to help them become confident and competent designers and makers of their own tools as they go along.

By opening up to society, collaborating with colleagues and out-of-school actors and by taking into account children’s informal learning, the ‘child’s world’, school enables children to learn in ‘real world’ environments and gain competencies that respond to future needs of both the society and each individual.

Based on the research done in the Omnischool research and development project, current challenges of educational change are identified and characterised from the point of view of ubiquitous learning. Ubiquitous learning requires new pedagogy through boundary crossing between disciplines, practices and institutions. Moreover, interprofessional pedagogical collaboration, reflection of curriculum and promotion of teachers’ professional development is needed.

This publication presents both theoretical and pedagogical perspectives to the on-going educational change. Educational Change Report 2016 draws from the learning environment research and development projects conducted at University of Helsinki.

1. UBIQUITOUS LEARNING

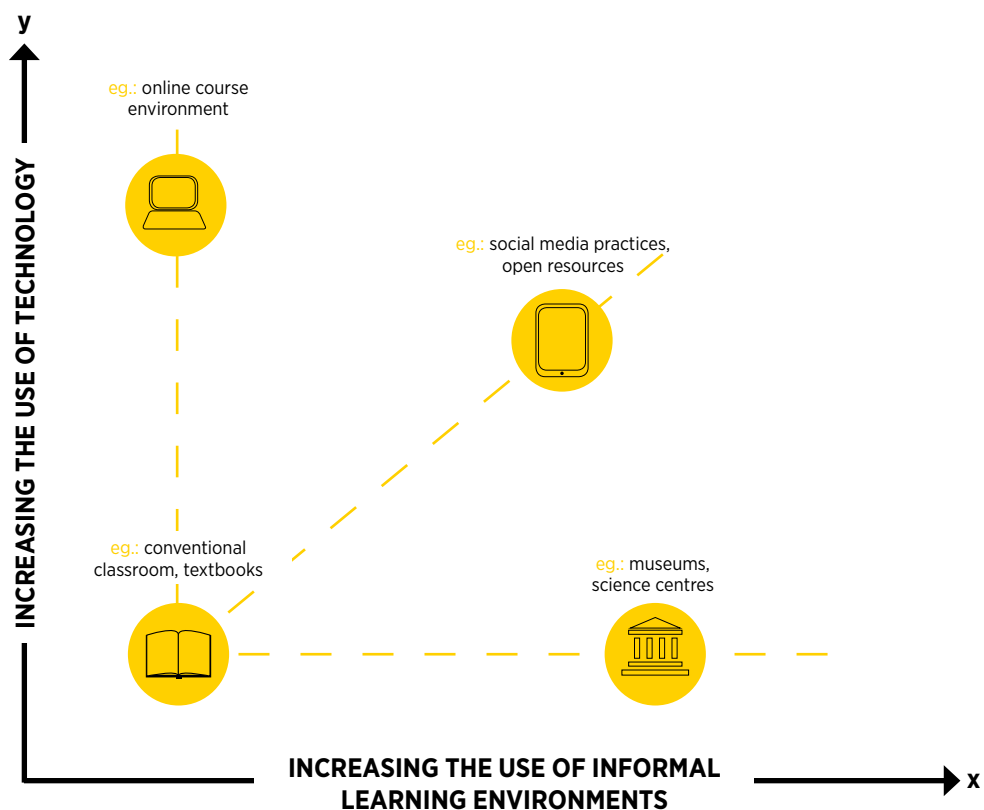
Learning is increasingly seen as ubiquitous and this is one of the facts that the school change should be based on. Therefore, it is crucial to analyse the ways schools can open up to society and how to narrow the gap between (formal) school learning and (informal) out-of-school learning.

In school, ubiquitous learning can be considered both as a challenge and as a potential. A child uses a vast amount of environments, communities, technologies and tools in his or her everyday life. If we then try to build the pedagogy on each individual's learning ecologies, ubiquitous learning is a challenge (Barron, 2006). Potentially, ubiquitous learning encourages educators to use creativity and freedom to carry out education beyond the classroom and to use the multiple resources and environments that exist in children's learning ecologies and local communities.

1.1 DIMENSIONS

Ubiquitous learning crosses the boundaries between formal-informal, local-global, and physical-virtual (cf. Smeds, Krokfors, Ruokamo & Staffans, 2010). Analysing the dimensions help educators to locate the dynamic conception of (ubiquitous) learning in different learning environments. The dimensions form a conceptual space for learning in learning environments, where local experts and environments, technological and digital tools and networks are regarded as essential resources for teaching and learning.

Figure 1.
MODEL FOR
UBIQUITY IN
EDUCATIONAL
CONTEXTS

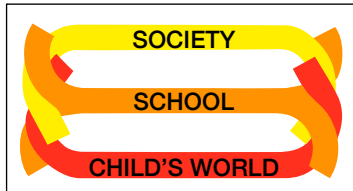


On the y-axis, learning practices refer to the growing ubiquity of technology and social media. At the zero point, no digital technology is needed and learning is typically characterized by learning with traditional learning methods and tools in the classroom. When ubiquitous technology increases learning will be more technology-mediated, networked and hybrid: different technological tools, digital games and social media are used.

When moving away from the reference zero point on the x-axis, formal education negotiates more with informal learning and learning environments. Examples of moving from classroom to out-of-classroom settings include school gardening and learning in authentic environments e.g. in a nature school or with a professional expert in a smithy.

When both x- and y-axis build tensions with non-digital school-based learning modes, open educational resources and mobile learning possibilities become more likely. One example of ubiquitous learning in the school context is mobile gaming in the local nature or town. In this case learning has been taken to an out-of-school environment by simultaneously using modern tools.

1.2 ACTORS



The school change requires boundary crossing between different actors and practices. Various educational actors in diverse educational

settings represent a variety of sociocultural practices with their own cultural and historical origin. Developing educational practices require boundary crossing:

- a) between the society and the school,
- b) inside the school and
- c) between the child's world and the school.

Boundary crossing is a bidirectional and dynamic learning process which simultaneously takes place on institutional, interpersonal and intrapersonal levels. In boundary crossing activities, teacher is a pedagogical leader in interprofessional collaboration building pedagogical continuums between the practices.

1.3 PROCESSES

Changes in the school culture proceed step-by-step. Based on the literature review on boundary crossing, Akkerman and Bakker (2011) have identified learning mechanisms that are relevant in the processes of boundary crossing in school context. Those mechanisms are:

- identification
- reflection
- coordination
- transformation

In identification, the intersecting cultures are (re)defined in light of each other. In coordination, diverse common practices are being created, even in the absence of consensus. In reflection, differences and similarities between the practices are being observed and defined, which leads the actors to value each other. Transformation refers to changes in practices and even to the creation of new synthetic practices.

The learning mechanisms help to structure schools' development processes and provide an understanding of the school change and learning in the intersecting sites (see also Figure 2). As Akkerman, Bruining and Eijnden (2012) suggest, identification, coordination, reflection and transformation can also form a temporal continuum in the development process. This means that in the beginning of the process, through shared identification, the existing sociocultural practices are questioned. For example, societal development and discussion on the increased role of technology in children's life might trigger the questioning of old practices (Hyvärinen, Kangas & Krokfors, 2015). In the next phase, through coordination, the schools and their out-of-school partners, for example, determine shared goals for collaboration and reflect on existing practices by taking new perspectives. When transformation is achieved, joint work at the boundary and development of pedagogical practices become continuous and sustainable activities.

2. PEDAGOGY

2.1 BOUNDARY CROSSING AND PARTICIPATIVE PEDAGOGY

The school change requires new pedagogical practices that here refer to boundary crossing pedagogy and participative pedagogy (see Figure 2). Conceptually, these pedagogies emphasise different aspects in teaching and learning.

Boundary crossing pedagogy highlights the teacher's role as a pedagogical leader of interprofessional collaboration and emphasizes different boundary crossing processes. Participative pedagogy, in turn, stresses the teacher's role as a leader of co-creative learning practices. In this case, teacher is the designer of participative learning processes, and allows and encourages active participation through exploration, creativity and collaboration (Krokfors, Kangas, Vitikka & Mylläri, 2010). In practice, boundary crossing pedagogy and participative pedagogy intertwine.

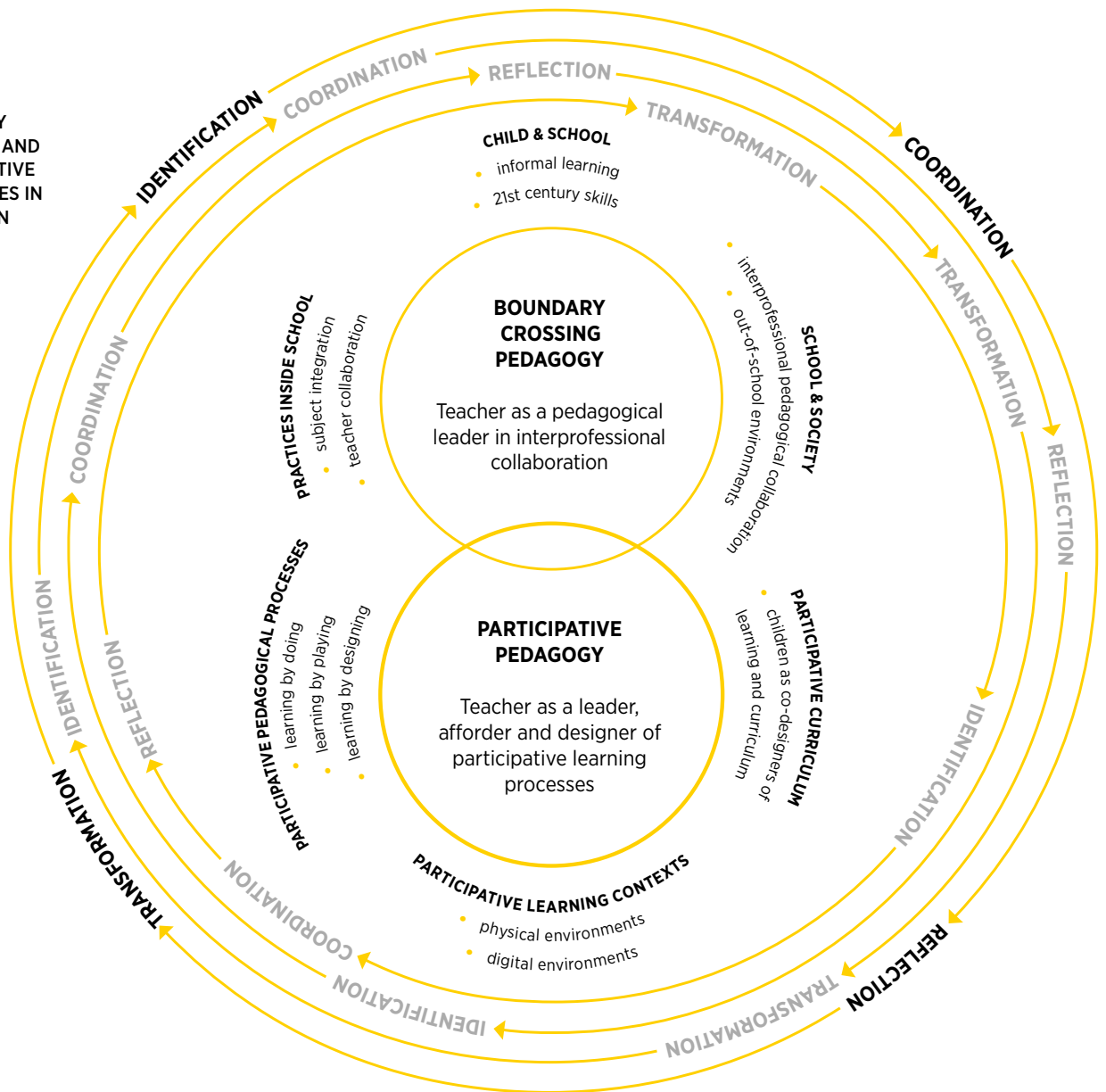
The starting point in boundary crossing pedagogy lies in designing learning practices that would cross boundaries between school and society; inside school; and between child's world and the school (see "actors" above). Crossing the boundaries inside the school refers, for instance, to subject integration, teacher collaboration and blurring the boundaries between school years. Taking into account the child's world and harnessing his or her interests and competencies into resources for curriculum-based learning are examples of crossing the boundaries between the child and a school. An example of boundary crossing pedagogy where boundaries are crossed between the school and the society is interprofessional collaboration with out-of-school partners.

Participative pedagogy appreciates children's agency, which can be stimulated through using a variety of participative learning methods. As the Omnischool research on agency has shown, different learning environments trigger different type of agency (e.g. Löfman, 2014). Learning by doing and learning by playing are examples of participative pedagogical processes in school (see Figure 2). Various physical and digital learning environments provide contexts for participative learning practices.

For instance each year children can be responsible for small projects where

Figure 2.

BOUNDARY CROSSING AND PARTICIPATIVE PEDAGOGIES IN EDUCATION



teachers still lead and support the learning processes. In such learning practices, students learn to be the authors of their own learning; to act accountably, take initiatives and make decisions together (Kangas, et al., 2014).



Digital technologies can support the implementation of participative pedagogy. In terms of mobile and game-based learning, digital games, gamification and game creation offer learning processes that value children's participation (Kangas, Vesterinen & Krokfors, 2014). Moreover, they provide teachers opportunities for guiding the learning processes and for acknowledging "teachable moments". The model of participative game pedagogy, developed in the Omnischool,

offers tools for teachers to design and assess participative learning processes in the context of games (Krokfors, Kangas & Kopisto, 2014).

The teacher creates pedagogical frames for participative learning practises. Notably, also children should have a chance to participate in curriculum design and in defining the goals for their learning. This participative curriculum aspect regards children as agentive learners and encourages them to engage in learning such knowledge and skills that matter in life.

2.2 INTERPROFESSIONAL PEDAGOGICAL COLLABORATION

As pointed out earlier, boundary crossing pedagogy requires interprofessional pedagogical collaboration. In interprofessional pedagogical collaboration, all the participants aim towards the common goals of enhancing children's learning and developing learning environments and educational practices.

Many schools in Finland are already applying some boundary crossing pedagogical practices, however, it is essential to develop them into more sustainable and pedagogically grounded, also in terms of curriculum. What are the prerequisites to consider when collaborating with out-of-school partners in order to promote students' learning?

- Firstly, partners' pedagogical knowledge is the main requirement for the whole collaboration. This means that both the teacher and the out-of-school partner have to be knowledgeable in pedagogical thinking which relates to decision-making in teaching situations.
- Secondly, the learning process includes shared roles and responsibilities among the partners. Teacher and out-of-school partner need to learn how to support and learn from each other when collaborating in learning sessions with students. "The practitioners seem to learn to do interprofessional work while doing interprofessional work", as Edwards and her colleagues put it (2009, 85).
- Thirdly, there is always the question about resources; the extra effort in time allocation is needed from everyone in order to enable the development of practices for creating collaboration on the boundary (Akkerman & Bakker, 2011; Callahan & Martin, 2007; Edwards, 2009).

Collaboration with out-of-school partners requires continuous joint work at the boundaries and systematic development and assessment of pedagogical practices. In some cases, interprofessional collaboration leads to transformation. Transformation can emerge, for instance, from actors' changing roles (Hyvärinen et al., 2015). Depending on the learning environment, actors can have the role of an expert or of a learner or even both. In some situations, teacher's role as a learner is more prevalent while the partner is the knowledge expert. Furthermore, teacher's role as a learner enables a better understanding of student's perspective.

3. CURRICULUM

3.1 CURRICULUM RENEWAL IN FINLAND

The core curriculum for basic education has an important role in enabling and managing educational change (Vitikka, Krokfors & Hurmerinta, 2012) since the curriculum defines the knowledge and competencies needed in the future (OECD, 2005). The national core curriculum in Finland forms a framework on the basis of which local and school level curricula are devised. The Finnish educational system is characterized by devolution of decision power and responsibility to local level, which internationally compared is a unique feature of the Finnish education system. Principals and teachers are engaged in the curriculum renewal work. What is noteworthy is that Finnish education system does not rely on national exams, pre-evaluation of learning materials or school inspections (Darling-Hammond, 2010; Krokfors, 2007). Teachers' professional autonomy is highly appreciated. Teachers are professionals who are responsible for planning, implementation, and assessment of teaching, learning and curriculum. They are free to choose the learning and assessment materials as long as they are in line with the requirements of the curriculum.

In Finland, the national curriculum for basic education has been recently renewed. The curriculum renewal aims towards a new working culture in schools and towards creating learning environments where integration within subjects is encouraged. Importantly, the curriculum renewal not only strengthens possibilities for school change but also obliges schools to update their educational practices to correspond to 21st century learning and skills, however, without forgetting subject content knowledge. Moreover, interprofessional working culture and the idea of school as a part of a larger learning community are some of the underpinnings of the renewal. Therefore, in order to successfully provide quality education, school needs to create learning environments that cross a variety of boundaries, for example between practices, disciplines and institutions.

3.2 UBIQUITOUS LEARNING IN CURRICULUM

In terms of ubiquitous learning and extended learning environments, many schools in Finland have already developed their practices towards this direction both physically and virtually. Some schools have a long history of creating linkages between the school and surrounding community by utilising the expertise provided by local actors. The networks of schools include companies, organisations, groups, and individual persons from the local community. In these schools, working on the boundaries (i.e., transformation) is also implemented in the curriculum level. Namely, they have included the extended school activities and local environments in the school curricula. This means that in each grade children's learning activities are linked with certain local out-of-school workshops and environments. Furthermore, new learning environments also include virtual environments. To validate boundary crossing pedagogy with the curriculum primarily means the understanding of the pedagogical nature of the curriculum (Krokfors et al., 2010).

The implementation of curriculum requires changes in learning materials and teaching approaches. It is not enough to transform traditional books into e-books. Virtual and open access environments as well as social media should also be used. In Finland, where textbook-based pedagogy has traditionally been strong (Vitikka, 2009), textbooks have had a tendency to include large amounts of subject content derived from the national core curriculum. Instead of considering the curriculum structure linearly, as represented by textbook series, it should be seen as a spiral. This allows more in-depth and gradually expanding subject content and knowledge creation as well as more creative pedagogical approaches.

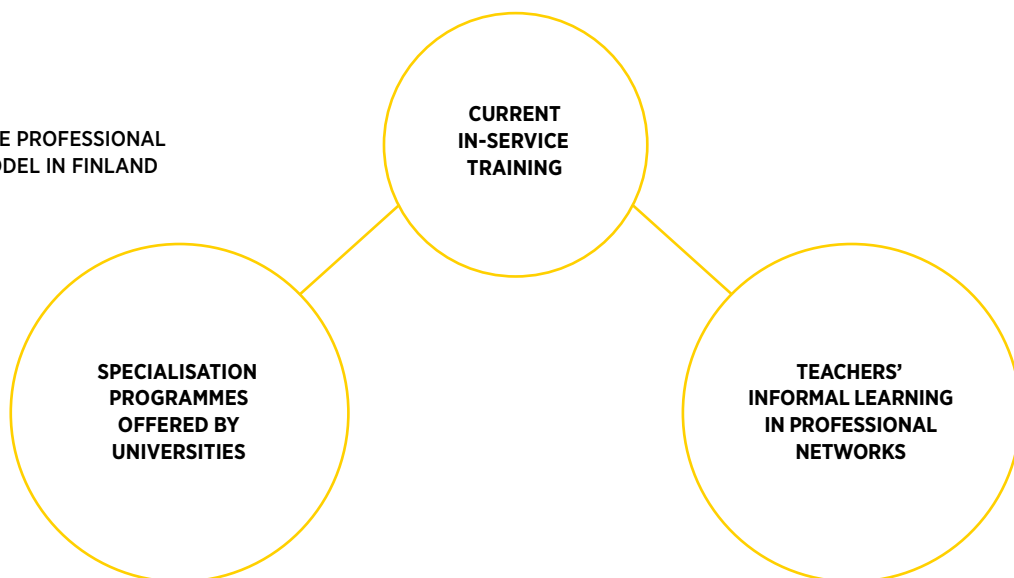
Curriculum is a central tool for renewing the school and pedagogy. The national core curriculum should be primarily seen as a guide for teachers' pedagogical praxis (Vitikka et al., 2012). It then gives more opportunities to interpret the curricular content locally and, thereby, implement boundary crossing and participative pedagogical practices.

4. TEACHERS' PROFESSIONAL DEVELOPMENT

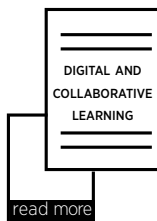
It is important to provide teachers with many channels and models of support for their professional development and for the challenge of educational change. There is a need to widen the current in-service training model (in Finland) to reach out the two traditionally less emphasized areas.

Figure
3.

WIDENING THE PROFESSIONAL
LEARNING MODEL IN FINLAND



4.1 SPECIALISATION PROGRAMMES OFFERED BY UNIVERSITIES



Finnish teachers participate in in-service training less than their European colleagues (OECD, 2014, 103). Therefore there is a strong need for more in-depth learning opportunities provided by home institutions such as universities' pre-service teacher education units. The idea is to provide a more systematic support model for teachers to enhance their professionalism and research-based practices. An example of this model is the New Zealander The Mind Lab by UNITEC.

Often the in-service training for teachers in Finland is inconsistent, inadequate, inaccurate and ineffective. Teachers should have a chance to have in-depth courses and programmes for their professional development. These days, a systematic approach to certain areas of pedagogy and school development is more and more urged. Those teachers who find their professional learning to be the key to their job satisfaction and well-being at schools should be able to join, e.g. a year-long programme with a focus on their own professional aims and needs.

Universities are the places where teacher education follows the steps of research-based development. Therefore, they should be the ones to offer these programmes together with various stakeholders and experts. Universities themselves should see their role in providing support and opportunities also for alumni. PhD programmes seem to be the only option for teachers to continue their professional education. Systematic in-service teacher training provided by universities is the way to take smaller steps in theory-practice interaction.

4.2 TEACHERS' INFORMAL LEARNING IN PROFESSIONAL NETWORKS

Then again, the world is full of informal professional networks that offer the latest research information and practices for teachers from other teachers and learning environment enthusiasts. These networks can be physically organized for example in municipalities. However, these days they operate increasingly more worldwide over the Internet and social media services.

While teacher education needs to have shared vision of its new in-service training functions, there is also a need to recognize other funds of knowledge that teachers nowadays have in their professional learning. There are two strong leading ideas behind the informal professional learning: Firstly, it allows teachers to have agency over professional and school development. Secondly, although this type of professional learning is informal, it needs to be supported.



A professional learning model, the Learning Festival concept, has been developed in Omnischool Research and Development Project. The Learning Festival is a way to enhance professional learning and focuses on the strengths of the school and its surrounding community.

In terms of teachers' professional development in Finland, the usual scenario is that only a few active teachers leave their school for one or two days to attend in-service training. Instead, in the Learning Festival, the whole school including all the teachers are engaged in implementing the teaching experiments, and in developing their pedagogical and professional practices together with their students. The projects are always connected with the curriculum. In addition, the projects are shared in the community as well as online in wider networks.

CONCLUDING WORDS

To conclude, learning is ubiquitous, pedagogy needs to cross boundaries and curriculum must be seen as a pedagogical document, not merely as an administrative steering document.

In order to understand the educational change, we must accept that learning in school means learning everywhere. A creative mindset is needed to implement the research-based pedagogical models. In order to flourish, it is critical that everyone is encouraged towards collaborative learning. The educational change involves all of us.

We LEARN, CREATIVELY, TOGETHER

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